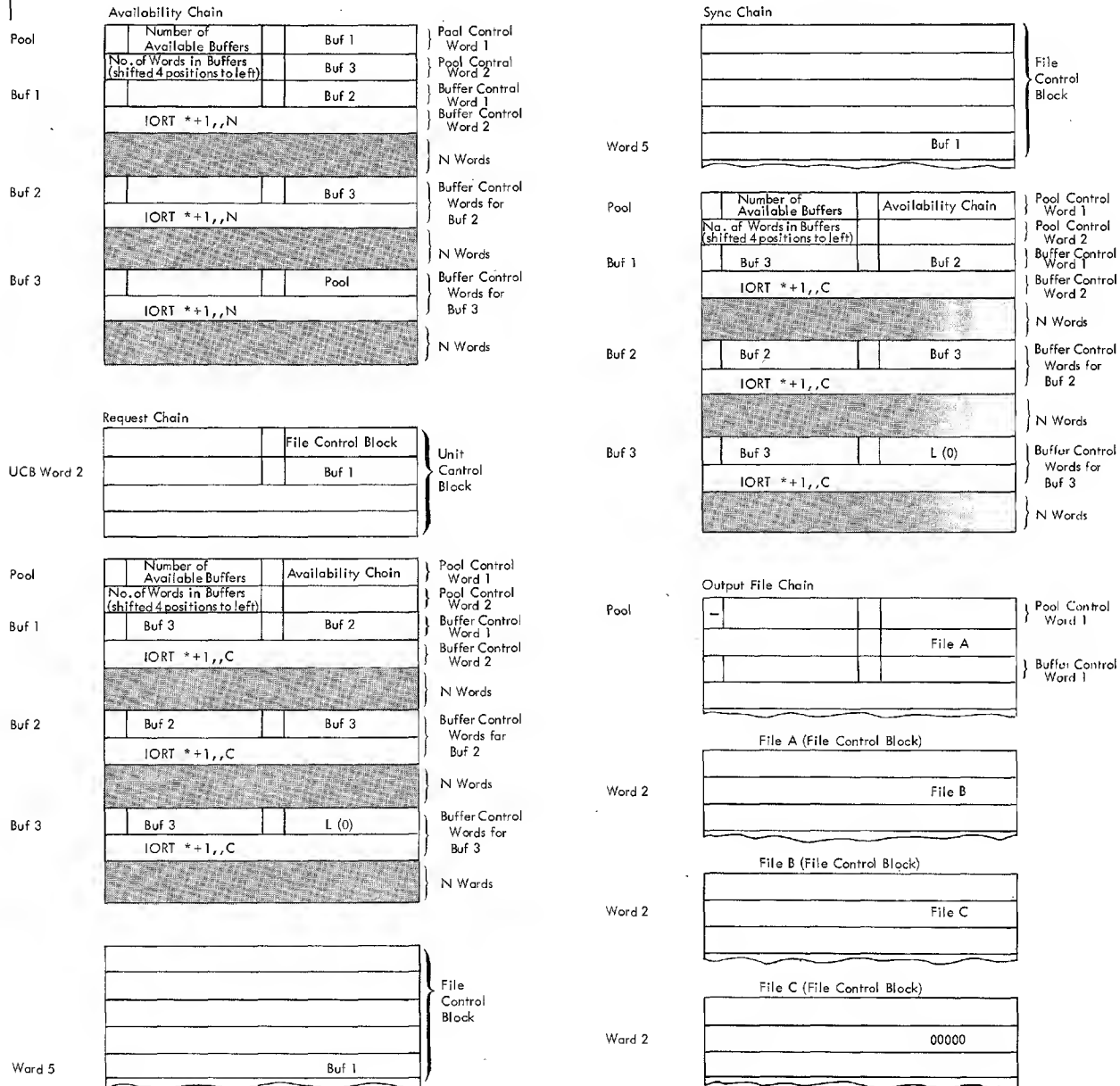


# BUFFER POOLS AND CHAINS

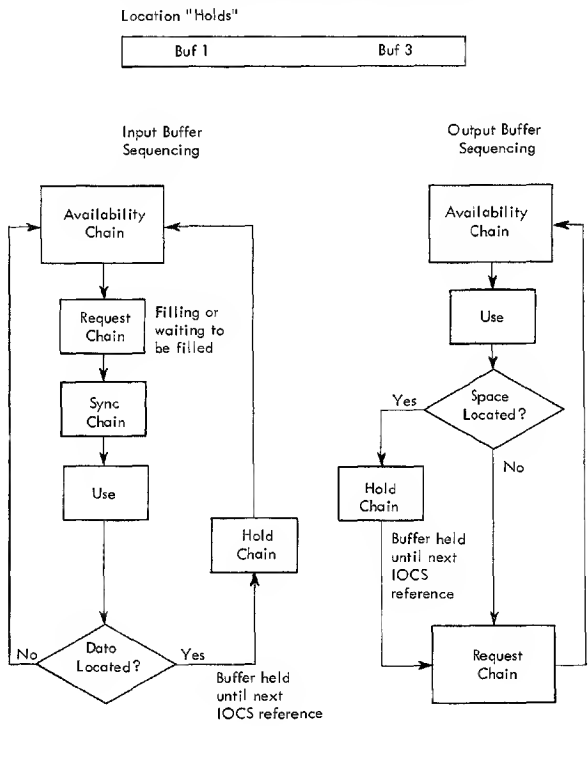


## Explanation of Terms Used in Buffer Diagrams

- Availability Chain - Chain consisting of all buffers not currently being used.
- Request Chain - Chain consisting of all buffers that are awaiting an Input/Output Operation.
- Sync Chain - Chain consisting of buffers that have been filled by a read operation and are waiting to be used.
- Output File Chain - Chain consisting of all output files using a particular buffer pool.

- Hold Chain - Chain consisting of buffers in which data or space has been located by use of nontransmitting commands in either a read or write calling sequence.
- Size of Buffer Pool - (Number of Buffers) (Length of Each Buffer +2) +2 words.
- N - Number of words in each buffer.
- C - Number of words to be written or number of words in buffer (if reading), where C is ≤ N.

Note: All buffers except last will be prefixed by 7 if hold chain is formed by write.  
Prefix of last buffer is blank if last buffer is not completely used, to indicate that this buffer is to be returned to use in next reference.



# FORMAT OF UNIT ADDRESSES IN UCB'S

5	6	7	8	9	10	11	12	13	14	15	16	17				
Unit Address for Tape and Card Equipment													For 729 Tape Units - BCD Mode Address For Card Equip and Printers - Octal Address (See Chart Below)			

5	6	7	8	9	10	11	12	13	14	15	16	17
Channel (1 through 8)				Device (000)			D C (0 or 1)	0	Module Number (0 through 9)			

5	6	7	8	9	10	11	12	13	14	15	16	17
Channel (1 through 8)				Device (001)			D C (0 or 1)	0	Module Number (0 through 9)			

5	6	7	8	9	10	11	12	13	14	15	16	17
Channel (1 through 8)				Device (011)			D C (0 or 1)	0	Module Number (0, 2, 4, 6, or 8)			

5	6	7	8	9	10	11	12	13	14	15	16	17			
Unit Address for 7340 Hypertape													E O D I	Location of the File Control Block Currently Using this UCB	
Unit Address for 1301 Disk Storage													E O D I	Location of User's (or the IOCS) Select Routine	
Channel (1 through 8)				Device (000)			D C (0 or 1)	0	Module Number (0 through 9)					Request Chain	
Unit Address for 7320 Drum Storage													E O D I	Location of User's (or the IOCS) Select Routine	
Channel (1 through 8)				Device (011)			D C (0 or 1)	0	Module Number (0, 2, 4, 6, or 8)					Request Chain	

Magnetic Tape Units				Printers			
Channel	BCD Address			Channel	Octal Address		
A	01201	to	01212	A	01361		
B	02201	to	02212	B	02361		
C	03201	to	03212	C	03361		
D	04201	to	04212	D	04361		
E	05201	to	05212	E	05361		
F	06201	to	06212	F	06361		
G	07201	to	07212	G	07361		
H	10201	to	10212	H	10361		

Card Readers				Card Punches			
Channel	Octal Address			Channel	Octal Address		
A	01321			A	01341		
B	02321			B	02341		
C	03321			C	03341		
D	04321			D	04341		
E	05321			E	05341		
F	06321			F	06341		
G	07321			G	07341		
H	10321			H	10341		

## Explanation of Codes Used in Unit Control Blocks

- A Availability Flag
- AF Seek Request Flag
- B Select Mode Flag (Normal or Backward)
- C Channel Type
- DI Tape Density at Current Positions
- DO Tape Density at Load Point
- EOT End-of-Tape Flag
- EW A End Warning Area Flag
- M Attachment Flag

# IBM 7090/7094 IOCS Reference Card

## UCB for 729 Tape and Card Equipment

5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35					
Word 1	A	M	T	R	C	Unit Address								E	O	D	I	Location of the File Control Block Currently Using this UCB																	
Word 2	S	R	Location of User's (or the IOCS) Select Routine								Request Chain																								
Word 3	Z	No. of File Marks Written On or Read from this Tape								No. of Records Written On or Read from this Tape																									
Word 4	File Serial Number if File is Labeled																																		

## UCB for 7340 Hypertape Units

	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Word 1																															
	A	M																													
		</																													

## UCB for 1301 Disk Storage and 7320 Drum Storage Units

	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35				
Word 1	A	M	T	R	C	Unit Address								Location of the File Control Block Currently Using this UCB																					
Word 2	S	Location of User's (or the IOCS) Select Routine												Request Chain																					
Word 3	A	P	F	F	Seek Order (First Word)																														
Word 4	T	Seek Order (Second Word)												Desired Seek Address																					

- N Noise Record Flag (reading only)
- PF Seek Issued Flag
- R In Word 1 of a UCB - Reserve Status Flag
- In Word 2 of a Tape UCB - Permanent Redundancy Message Control
- S Select Type (Read or Write)
- T In Word 1 of a Tape UCB - Tape Unit Type
- In Word 1 of a Disk UCB - File Control Unit Type
- In Word 4 of a Disk UCB - Track Flag

## FORMAT OF THE FILE CONTROL BLOCK